

WHAT WE CLAIM IS:

1 1. A controlled plumbing fixture, comprising:
2 (a) a plumbing fixture;
3 (b) electromechanical valve means
4 operably associated with said fixture for regulating the
5 flow of water thereto;
6 (c) control means operably associated
7 with said valve means for controlling operation thereof;
8 and
9 (d) a self-calibrating push button
10 operably associated with said control means for supplying
11 a demand signal thereto and for thereby causing said
12 control means to supply a control signal to said valve
13 means for causing operation thereof.

1 2. The fixture of claim 1, wherein:
2 (a) said fixture is one of a toilet, sink
3 and shower.

1 3. The fixture of claim 1, wherein the push
2 button comprises:
3 (a) a movable plunger;
4 (b) biasing means operably associated
5 with said plunger for urging said plunger toward a first
6 position; and

7 (c) sensor means operably associated with
8 said plunger for generating the demand signal when said
9 plunger is moved to a second position remote from said
10 first position.

1 4. The fixture of claim 3, wherein:

2 (a) means are operably associated with
3 said sensor means for permitting said sensor means to be
4 moved from an intermediate position to said second
5 position and for maintaining said sensor means in said
6 second position.

1 5. The fixture of claim 3, wherein:

2 (a) said permitting and maintaining means
3 includes an elastomeric member.

1 6. The fixture of claim 5, wherein:

2 (a) said member is frustoconical, and the
3 frustum thereof is spaced from said second position.

1 7. The fixture of claim 3, wherein:

2 (a) said biasing means includes a coil
3 spring; and

4 (b) said spring surrounds at least a
5 portion of said sensor means.

1 8. The fixture of claim 7, wherein:
2 (a) said plunger includes a flange
3 engaged with said spring.

1 9. The fixture of claim 3, wherein:
2 (a) said sensor means is one of an
3 inductive sensor and a magnetic reed switch.

1 10. A controlled plumbing fixture, comprising:
2 (a) a plumbing fixture;
3 (b) an electromechanically operated valve
4 operably associated with said fixture for regulating the
5 flow of water thereto;
6 (c) a push button plunger operably
7 associated with said fixture for being operated by a user
8 of said fixture;
9 (d) biasing means operably associated
10 with said plunger for urging said plunger in a first
11 direction toward the user;
12 (e) movable sensor means spaced from said
13 plunger for generating a demand signal upon a user moving
14 said plunger into operative association with said sensor
15 means; and
16 (f) control means operably associated
17 with said sensor means and said valve for causing said
18 valve to operate when said control means receive a demand
19 signal.

1 11. The fixture of claim 10, wherein:

2 (a) means are operably associated with
3 said sensor means for allowing said sensor means to move
4 in response to and when engaged by said plunger and for
5 thereafter maintaining said sensor means in the position
6 to which it has been moved.

1 12. The fixture of claim 11, wherein:

2 (a) said allowing and maintaining means
3 includes an elastomeric member fixed relative to said
4 biasing means and slidably engaged with said sensor
5 means.

1 13. The fixture of claim 12, wherein:

2 (a) said sensor means is cylindrical, and
3 said member has an aperture through which said sensor
4 means extends.

1 14. The fixture of claim 12, wherein:

2 (a) said sensor means is one of an
3 inductive sensor and a reed switch.

1 15. The fixture of claim 13, wherein:

2 (a) said biasing means includes a helical
3 coil spring; and

4 (b) said sensor means extends through
5 said spring.

1 16. A self-calibrating push button,
2 comprising:

3 (a) a housing having a central chamber
4 and first and second spaced openings therein;

5 (b) a plunger positioned and movable
6 within said chamber and having a portion extending
7 through one of said openings;

8 (c) biasing means operably associated
9 with said plunger for urging said plunger toward said one
10 opening;

11 (d) sensor means operably associated with
12 said housing and having a portion extending through the
13 other one of said openings and into said chamber toward
14 said plunger; and

15 (e) means operably associated with said
16 sensor means for permitting said sensor means to move in
17 response to movement of said plunger towards said other
18 one opening and for maintaining said sensor means
19 thereafter at the position to which it was moved.

1 17. A push button of claim 16, wherein:

2 (a) holding means are operably associated
3 with said housing and disposed within said other one of

4 said openings for maintaining said biasing means within
5 said chamber.

1 18. The push button of claim 17, wherein:

2 (a) said permitting and maintaining means
3 is secured to said holding means.

1 19. The push button of claim 18, wherein:

2 (a) said permitting and maintaining means
3 includes an elastomeric member.

1 20. The push button of claim 18, wherein:

2 (a) said member is frustoconical, and has
3 a base proximate said other one of said openings and a
4 frustum extending therefrom.

1 21. The push button of claim 20, wherein:

2 (a) said sensor means is cylindrical and
3 is engaged by the frustum.

1 22. The push button of claim 21, wherein:

2 (a) said biasing means is a coil; and
3 (b) said sensor means extends coaxially
4 through said coil.

1 23. The push button of claim 20, wherein:

2 (a) means are operably associated with
3 the base of said member for fixing said member relative
4 to said holding means.

1 24. The push button of claim 21, wherein:

2 (a) said sensor means is one of an
3 inductive sensor and a reed switch.

1 25. The push button of claim 21, wherein:

2 (a) a flexible cord has a first end in
3 electrical connection with said sensor means and an
4 opposite end having a releasable connector for connection
5 with said control means.

1 26. A method of calibrating a push button
2 having a plunger, a spring operably associated with the
3 plunger for urging the plunger in a first direction, and
4 a sensor, the method comprising the steps of:

5 (a) moving the plunger in a second
6 direction opposite to the first direction and thereby
7 engaging the sensor and moving the sensor in the second
8 direction; and

9 (b) securing the sensor in the position
10 to which it was moved by the plunger.